

**RESTORATION INFORMATION MANAGEMENT SYSTEM
FORMERLY USED DEFENSE SITES (FUDS)
PROJECT FACT SHEET**

30 June 1997

HNC REVISION: 24 NOVEMBER 1997

TAG REVIEW DATE: 28 JANUARY 1998

1. SITE NAME: Fort Delaware

SITE NUMBER: C03DE052602

LOCATION:

City: Pea Patch Island

County: New Castle

State: Delaware

PROJECT NUMBER: C03DE052602

CATEGORY: OE

INPR RAC: 2

ASR RAC: 2

TAG RAC: 2

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3. SITE DESCRIPTION: Fort Delaware is on Pea Patch Island in the Delaware River, about 12 miles south of Wilmington, Delaware. Fort Delaware and Pea Patch Island consists of approximately 178 acres in New Castle County. Military use began in 1814 when the War Department took possession of the island and began to construct a fort for coastal defense. The original fort burned in 1831 but the Army rebuilt another and completed it in 1862. During the Civil War, the site was an infamous Confederate prison housing as many as 12,595 prisoners. After 1870, the fort essentially remained either under recurring modernization, in caretaker status or garrisoned briefly during times of war. The ordnance and explosives related features included the use of various types of coastal defense weaponry from the 1820s to 1940s, assistance in mining the Delaware River channel during the Spanish American War and World War II, as well as small arms. The War Department declared the site surplus to the needs of the Army on 1 October 1944.

4. SITE HISTORY:

Interest in establishing fortifications on Pea Patch Island for the protection of the Delaware River valley, including Philadelphia, began as early as 1794. That year, Pierre Charles L'Enfant surveyed the river and recommended that a fort be erected on the island. Little progress occurred until the State of Delaware ceded the island to the U.S. in May 1813. Although Delaware ceded the island to the U.S., in the spring of 1822, Doctor Henry Gale of Salem County, New Jersey disputed the grant of Pea Patch Island. He claimed that he owned the island due to a proprietary grant in 1664. The case dragged through litigation for years and halted work on the island in 1835. The matter was refereed to the Chief Justice of the United States who declined to render a decision. An arbitrator finally rendered a decision in favor of the United States on 15 January 1848. In 1814, the Army took possession of the island and commenced building dikes, wharves and fortifications. Beset by construction mistakes and cost overruns, the fort wasn't completed until November 1827. It lasted only a little over three years, as a fire on 8-9 February 1831 razed the original structure.

Details of the armament and ordnance stored at the first fort on Pea Patch Island (1824-1831) are not available. The original fort included a powder magazine which was emptied during the fire that ruined the original fort in 1831. Soldiers threw the powder out the embrasures onto the frozen moat encircling the fort to prevent a large scale explosion.

The Army began plans to construct a new fort almost immediately, though Congress did not appropriate funds to began construction until 1836. The Army did officially name the new fort at Pea Patch Island, Fort Delaware, in 1833. Disputes over the ownership of the island delayed construction ten years and the second fort wasn't completed until 1862. The Army first garrisoned the new fort in February 1861, with the first shipment of armament arriving several months later in May.

The second fort was a three tier, irregular pentagon, encompassing approximately six acres of land on the southern end of the island. It included embrasures and barbettes for 155 guns. It had four main storage magazines, two each on the first and second floors, along with numerous small service magazines on the terre plain.

Fort Delaware's armament reached a total of 134 guns by the end of the Civil War, though its renown during this period came as a prisoner of war camp. Beginning in April 1862, the Union Army housed captured Confederate soldiers on the island. Barracks outside the fort, originally designed to hold 10,000 prisoners, eventually confined as many as 12,595 captives. Harsh conditions and overcrowding gave Fort Delaware a notorious record as a prison and accounted for many deaths during the war. Following the war, the Army retained a small garrison at Fort Delaware and performed limited maintenance.

The rise of heavy rifled artillery during the Civil War rendered obsolete many of the previously designed seacoast defenses. As a result, the Board of Engineers decided to augment the fortifications of the Delaware River at Pea Patch Island by placing batteries on the New Jersey and Delaware shores in 1866. The planned fortifications would form a line across the river. The New Jersey shore fortification at Finn's Point eventually became Fort Mott and the Delaware City emplacement became Fort DuPont. Fort DuPont, Delaware should not be confused with Fort DuPont, Washington, D.C. The later was part of a system of temporary earthen embankments that surrounded the Capitol during the Civil War between 1861-1865. By 1869, the Board of Engineers planned modifications to Fort Delaware's armament as well, including adding magazines. The Army withdrew the garrison on 19 October 1870 and turned the fort over to the Chief of Engineers. The Corps of Engineers maintained Fort Delaware in caretaker status while overseeing work on modifications and construction on Forts Mott and DuPont. Construction languished over the following decades due to scarcity of funding and the priority of river and harbor engineering projects in the area.

The rearmament of the seacoast defenses with breech-loading steel guns in the late 19th century dictated modernization in the armament for Fort Delaware. Work began on three 12-inch disappearing gun emplacements, known as Battery Torbert, in 1894 but as before, work progressed slowly and wasn't completed until March 1900.

Construction on four other updated gun emplacements were completed in the early 1900s as Batteries: Alburtis, Allen, Dodd and Hentig.

In the 1890s, a weapon modernization effort of installing breech loading weapons at Fort Delaware began. In August 1894, Congress appropriated funds for a three gun lift battery at Fort Delaware; later they modified it to three 12-inch disappearing gun emplacements. In May 1898 the Army temporarily emplaced two 4.72-inch Rapid Fire guns to the west of Fort Delaware on Pea Patch Island, storing the ammunition adjacent to the mounts. The next month, work began on a permanent emplacement (i.e. Battery Dodd).

On the eve of the Spanish-American War, the Army completed a torpedo (i.e., mine)

storehouse on the north end of Pea Patch Island by 29 November 1897. It was a fireproof brick structure and had a storage capacity for 236 mines. Dynamite for the mines was stored in one of the fort's magazines. The Army set up two case mates at Fort Delaware for controlling the mine groups on both channels of the river around Pea Patch Island. Between 22 April and 12 May 1898, they placed the mines in the channel but the condition of the mines quickly deteriorated. Engineer troops retrieved the mines between 19 and 28 July. They remained at Fort Delaware until October 1898 storing the mines. The amount of dynamite in the mines did not exceed 5,900 pounds.

During the hostilities surrounding the Spanish-American War in 1898, activity increased at Fort Delaware. The Army briefly garrisoned the fort with soldiers other than engineer troops, though by August 1898 the Secretary of War recommended their removal. Troops also participated in placing mines in both the east and west channels of the Delaware River beginning in the spring of 1898. The mines were removed by that fall.

In March 1900, much of the obsolete, Civil War era armament was moved to the dock of the east side of the island and the Ordnance Department sold it in May. However, the fifteen 8-inch converted rifles remained at Fort Delaware.

During World War I, the Army briefly established a garrison of artillerymen at Fort Delaware and the War Department planned to build a large shell loading facility on the island. The Armistice and rising cost estimates canceled the shell loading project in November 1918. After the war, the Army left only a skeleton force of coast artillerymen in the area headquartered at Fort DuPont to act as caretakers for Forts DuPont, Mott and Delaware. The two long range batteries completed at Fort Saulsbury about 50 miles to south in 1920, rendered these three forts at best a second line of defense. By 1920, the Army removed the obsolete guns at Batteries Allen, Alburtis and Dodd, leaving only Batteries Torbert and Hentig at Fort Delaware. The caretaker status of forts continued throughout the 1930s.

On 21 October 1940, the Army authorized removal of the guns at Battery Torbert, which was completed by November. The three guns were shipped to Watervliet Arsenal. In January 1941, they modernized the 3-inch rapid fire guns at Battery Hentig with a wraparound shield and manned it the following June. They added a 60-inch searchlight on a 65 foot disappearing tower at the southwest bank of Pea Patch Island that same year. In January 1942 the Army began mining the Delaware Bay channels and sent troops to Fort Delaware to assist the main mine facilities at Fort Miles. By 9 January 1942 the mine facilities at Fort Miles were completed. The mine facilities included a wharf and boat house, two mine loading rooms, a mine storehouse, two small magazines and four earth covered magazines. Construction of Fort Miles at Cape Henlopen at the mouth of Delaware Bay began in 1938. Along with the Cape May Reservation on the New Jersey shore, they guarded the mouth of Delaware Bay rendering the interior coastal defenses obsolete once operational. On 7 June 1942 the Army removed the 3-inch guns from Battery Hentig, leaving only a small caretaker

detachment at Fort Delaware.

On 1 October 1943 the War Department eliminated Fort Delaware from the Harbor Defenses of Delaware and categorized it as surplus a year later. In 1947 the State of Delaware acquired the fort and surrounding island and turned it into a State Park.

During World War I, the Army briefly established a garrison of artillerymen at Fort Delaware. The end of hostilities and the emplacement of newer long range guns at Fort Saulsbury rendered much of the late 19th century weapons obsolete. On 23 June 1919, the fort scrapped battery Dodd's 4.72-inch caliber guns. By July 1920, the Army removed the 3-inch guns of batteries Allen and Alburtis. Batteries Torbert and Hentig remained but in a caretaker status.

In November 1940, the Army dismantled Battery Torbert and shipped the three guns to Watervliet Arsenal. They added a wraparound shield for the 3-inch Rapid Fire guns of Battery Hentig and manned it in June 1941. Battery Hentig lasted another year, as the guns were removed in June 1942.

Troops at Fort Delaware assisted in mining the channels for defenses of Delaware Bay beginning in 1942, though the main mine facilities were located at Fort Miles. By October 1943 the War Department eliminated Fort Delaware from the Harbor Defenses of Delaware and categorized it as surplus a year later.

The archive search uncovered no documentation relating to chemical warfare materials at Fort Delaware. The archive search team found no indication that Fort Delaware conducted CWM training, storage, or disposal.

5. PROJECT DESCRIPTION:

AREA A: Fort Delaware and 89% of Pea Patch Island

Size, Acres: Approximately 159

Former Use: Fort Delaware, Confederate POW camp, ordnance storage areas (fort magazines and torpedo storehouses)

Present Use: State Park

Probable End Use: Same

Ordnance Presence: Confirmed

Type: Civil War cannon balls (explosive)

Potential

Type: Coastal defense and Civil War ammunition

AREA B: Eastern shoreline **(Not DERP-FUDS eligible)**

Size, Acres: 19

Former Use: Fort Delaware

Present Use: Corps of Engineers, Philadelphia District

Probable End Use: Future BRAC

6. CURRENT STATUS: This Archives Search Report (ASR) was completed by Rock Island District in July 1997.

7. STRATEGY: Area A: Engineering Evaluation and Cost Analysis (EE/CA)
Area B: NOFA - Ineligible

8. ISSUES AND CONCERNS: Huntsville Safety disagreed with the Risk Assessment Code (RAC) score of 2 and recommended a RAC 5 NOFA based on there being nothing but anecdotal information alluding to the finding of OE in or on Fort Delaware. He also stated, AThere are no EOD reports of OE finds referred to in the ASR. The only OE finds are those across the river and possibly on non-FUDS land.@

The ASR author's reply to HNC Safety review comments were as follows:

a. "The lack of AEOD Reports should not come as a surprise as the norm is that unless an event occurred in the last two years, a responding EOD unit will no longer have a report. In regards to past incident of OE finds, we frequently have to depend on hearsay accounts, which admittedly can be of questionable value. In this case, we strongly doubt the interviewees made up the accounts or misinterpreted the facts they related. We agree that the potential for OE hazards are highest along the eastern edge of the Delaware River (i.e., on the non-FUDS portion currently owned by the Corps of Engineers-Philadelphia District). Since the historic shoreline has receded inland, disposal seems less likely."

b. We are amenable to a NOFA at this time for the FUDS portion of Pea Patch Island. We are hesitant on a NOFA for the portion owned by the Corps of Engineers-Philadelphia District, though this isn't officially addressed by the ASR.

The Huntsville Center Technical Advisory Group reviewed this ASR on 28 January 1998 and made a determination that an EE/CA be performed based on the following:

a. The INPR Project Summary Sheet states, according to Delaware State Park personnel, Civil War vintage cannon balls with explosive charges were found onsite by park personnel approximately 20 years ago. Park personnel indicated that additional Civil War-era cannons and ammunition are believed to be buried onsite.

b. In an interview with Lee Jennings, Fort Delaware State Park historian, he felt there was a potential for unexploded shells being buried on the island. He mentioned other OE finds on the island. He briefly described that an EOD unit from Delaware came out last year (1996) to remove a WWII practice bazooka round and a couple of Parrott shells. These rounds were questionable, but they were still found on the island thus sustaining the potential for others to be buried.

c. Training at the fort during the Civil War consisted of the artillerymen firing the guns at targets outside the fort, into the river. At some time prior to 1957, dredge spoils were taken from the river and added to the island. This added roughly 60 percent more land to the island on the northwest. These dredge spoils may have contained OE.

d. The ASR did not reveal any certificates of ordnance clearance, decontamination or dedudding associated with Fort Delaware. Previous hearsay accounts of Army ordnance sweeps occurring in the 1960s couldn't be verified from first person accounts or by documentation.

e. The former park superintendent, Ray Armstrong, found several Civil War era fused cannon balls filled with gunpowder (common shell shot) along the southeastern shore line. The items became exposed from erosion, that continues. The area mentioned is the now non-DERP-FUDS eligible part of the island owned by the Corps of Engineers (COE), but erosion also happens in the southern areas of the island adjacent to the COE land and the potential exists for erosion to expose OE in the future.

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